In the Claims:

1(previously amended) A multiple beam RF device comprising:

a housing having a central Z axis, said housing enclosing a plurality of electron beam tunnels, each said beam tunnel having a conductive inner surface, and each said beam tunnel further comprising a sequence of drift tubes and drift tube gaps, said beam tunnels arranged about said central Z axis of said housing, and said housing including a plurality of apertures, one said aperture for each said electron beam tunnel;

a plurality of electron guns equal to said plurality of said electron beam tunnels, each said electron gun producing an electron beam passing uniquely through one of said electron beam tunnels;

a magnetic field applied to each said electron beam, said magnetic field having a variation of less than 5% over the extent of said electron beam tunnels;

each said electron gun having a cathode for the generation of electrons, an anode for the acceleration of said electrons, and a focus electrode for the focusing of said electron beams;

a magnetic field corrector adjacent to each said electron gun cathode for correcting said magnetic field such

that said cathode surface has a magnetic field which is everywhere perpendicular to said cathode surface.

2(original) The RF device of claim 1 wherein said beam tunnels are arranged substantially parallel to said central Z axis.

3(previously amended) The RF device of claim 2 wherein at least one of said drift tube gaps includes a port for the introduction of RF energy, and at least one of said drift tube gaps includes a port for the removal of RF energy.

4(original) The RF device of claim 3 wherein said housing is made from iron.

5(original) The RF device of claim 1 wherein said magnetic field is sufficient to achieve confined electron flow.

6(previously amended) The RF device of claim 1 wherein said magnetic field produces a confining force which exceeds the space charge forces in each said electron beam.

7(original) The RF device of claim 6 where the magnitude of said magnetic field is at least 2 times greater

than said magnetic field required to balance said space charge force.

8(currently amended) A multiple beam RF device comprising:

a housing having a central Z axis and an R plane orthogonal to said Z axis, said housing enclosing a plurality of electron beam tunnels, each said beam tunnel having a conductive inner surface, and each said beam tunnel further comprising a sequence of drift tubes and drift tube gaps, said beam tunnels arranged in said housing and parallel to said central axis Z of said housing, said drift tubes having a minimum separation distance from said central axis Z of value D;

a plurality of electron guns, each said electron gun having a cathode ~~having~~ with a thermionic emitting surface for the generation of electrons, an anode for the acceleration of said electrons, and a focus electrode for the focusing of said electrons into an electron beam, ~~said cathode having a thermoionic emitting surface for producing an~~ each said electron beam passing through one of said electron beam tunnels;

a magnetic field applied to each said electron beam, said magnetic field having a field variation of less than 5% over the extent of said electron beam tunnels;

~~each said electron gun having a cathode for the generation of electrons, an anode for the acceleration of said electrons, and a focus electrode for the focusing of said electron beams;~~

~~at least~~ one or more magnetic field correctors located near said cathode~~, said field corrector~~ modifying said magnetic field such that said magnetic field is perpendicular to each said cathode emitting surface.

9(currently amended) The RF device of claim 8 wherein said one or more magnetic field corrector comprises a single coil located near at least one said electron gun cathode, and said extent of said single coil is less than said separation distance D.

10(currently amended) The RF device of claim 8 wherein said one or more field corrector comprises a single coil located near at least one said electron gun cathode and said extent of said coil is greater than said separation distance D.

11.(currently amended) The RF device of claim 8 wherein said one or more field corrector comprises a first coil with an extent less than said separation distance D, and a second coil with an extent greater than said separation distance D, said first coil and said second coil located near at least one said electron gun cathode.

12(currently amended) The RF device of claim 8 wherein said one or more field corrector comprises a coil of current-carrying wire which produces said correction field.

13(currently amended) The RF device of claim 8 wherein said one or more field corrector comprises a permanent magnet.

14(currently amended) The RF device of claim 8 wherein said one or more field corrector comprises non-magnetized iron.

15(currently amended) The RF device of claim ~~9,10,11, or 12~~ 9 or 10 wherein said coil comprises a coil of current-carrying wire which produces said correction field.

16-17 (cancelled)

18-20(cancelled)

21(currently amended) The RF device of claim 8, wherein said one or more field corrector is located on the ~~main~~ central axis of said device, said field corrector has a near end in proximity to said housing and intersecting said central Z axis, and a far end opposite said near end, said field corrector comprising a radially symmetric magnetic cylinder, said field corrector having a first radius ~~which is smaller~~ on said near end, and a second radius on said far end which is larger than said first radius. ~~larger at any point near said far end.~~

22(currently amended) The RF device of claim 21, said one or more field corrector further including an electromagnetic coil on said smaller radius.

23(currently amended) The RF device of claim 21 or 22, said one or more field corrector further including field correcting cutouts around said plurality of electron guns.

24(currently amended) The RF device of claim 8 wherein said one or more field corrector provides a magnetic field

such that equipotential flux lines formed by said magnetic field when modified by said field corrector are substantially parallel to said electron beam tunnels.

25(original) The RF device of claim 1 or 8 wherein said RF device is an oscillator.

26(original) The RF device of claim 1 or 8 wherein said RF device is an amplifier.

27 (currently amended) A magnetic circuit for influencing the trajectories of a plurality of electron beams, said magnetic circuit comprising:

a cylindrical enclosure having a central axis and a first end cap having a plurality of apertures for the introduction of a plurality of electron beams and a second end cap for the removal of said electron beams, each said beam starting from a thermionic cathode;

a main field generator producing a magnetic field perpendicular to said central axis;

a circularly symmetric flange located on said central axis, said flange having a small diameter part for the disposition of a magnetic field generator and a large diameter part for introducing said field proximal to at least one of said cathodes;

~~optionally,~~ additional magnetic field correctors.

28 (previously added) The magnetic circuit of claim 27 where said magnetic field generator is a coil wound about said small diameter.

29 (previously added) The magnetic circuit of claim 27 where said magnetic field generator is a circular permanent magnet.

30 (previously added) The magnetic circuit of claim 27 where said additional magnetic field correctors includes a supplemental circular field generator located on the outer surface of said first end cap, having a center on said central axis, and having a diameter sufficient to enclose said apertures on said first end cap inside said diameter of said supplemental field generator.

31 (previously added) The magnetic field generator of claim 30 where said supplemental field generator is an electromagnetic coil.

32 (previously added) The magnetic field generator of claim 30 where said supplemental field generator is a permanent magnet.

33. (currently amended) The magnetic field generator of ~~claim 30~~ claim 27 where said main field generator is an electromagnetic coil.

34 (currently amended) The magnetic field generator of ~~claim 30~~ claim 27 where said main field generator is a permanent magnet.

35(claim 15 re-presented as a new claim) The RF device of claim 11 wherein said first coil comprises a coil of current-carrying wire which produces said correction field.

36(claim 15 re-presented as a new claim) The RF device of claim 11 wherein said second coil comprises a coil of current-carrying wire which produces said correction field.

37 (claim 27 re-presented as a new claim) A magnetic circuit for influencing the trajectories of a plurality of electron beams, said magnetic circuit comprising:

a cylindrical enclosure having a central axis and a first end cap having a plurality of apertures for the introduction of a plurality of electron beams and a second end cap for the removal of said electron beams, each said beam starting from a thermionic cathode;

a main field generator producing a magnetic field perpendicular to said central axis;

a circularly symmetric flange located on said central axis, said flange having a small diameter part for the disposition of a magnetic field generator and a large diameter part for introducing said field proximal to at least one of said cathodes.

~~optionally, additional magnetic field correctors.~~